



Next-generation Biomass Technology

## Agripellet burners

For domestic applications as well as large installations.



from 25 to 1000 kW



SPL25A

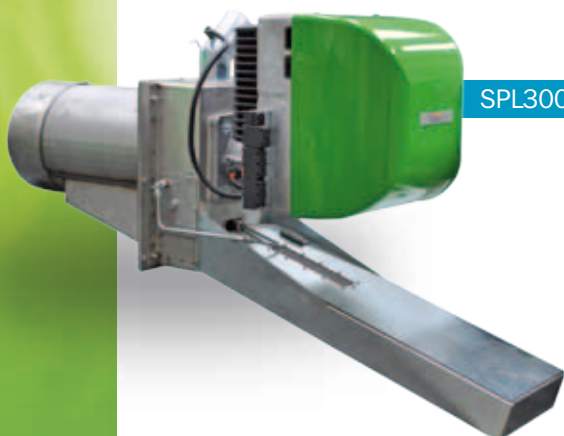
Agripellet



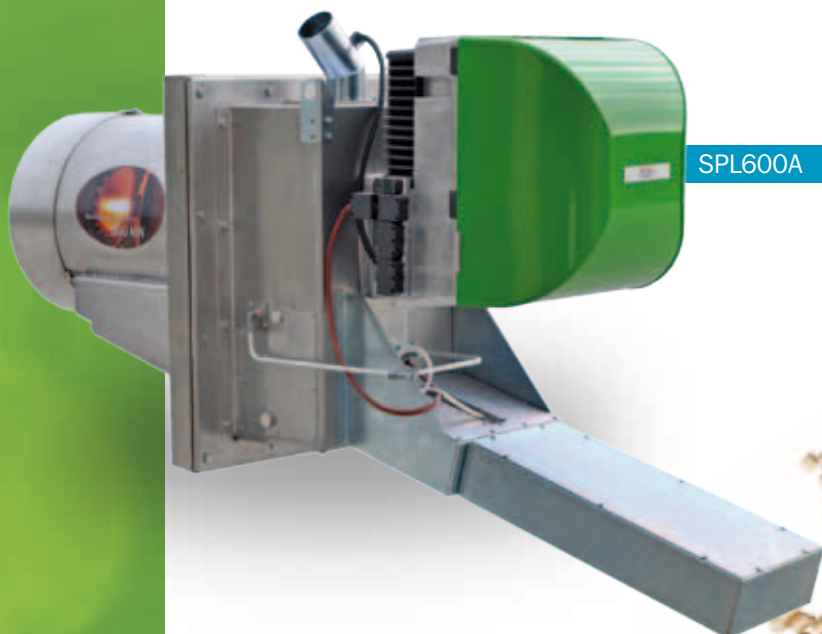
SPL50A



SPL100A



SPL300A



SPL600A

# Agripellet Burners

**from 25 to 1000 kW**

An innovative line of burners designed for a large variety of biomass types of vegetal origin, collectively known as AGRIPELLET. Such biomass presents a combustion challenge due to the high ash content and chemical composition, causing ash-melting behavior at low temperatures. These characteristics lead to combustion problems and eventually the blockage of equipment not specifically designed for the use of agripellet. The burner line SPL Biomass active is equipped with an advance cleaning system consisting of a combination of both mechanical and pneumatic cleaning. The ash is therefore automatically removed from the burner in order to maintain efficient combustion.

Model	Power	
	Min	Max kW
SPL25A	12,5	20
SPL35SA	20	35
SPL50A	25	40
SPL65A	30	65
SPL100A	50	80
SPL200A	100	160
SPL300A	150	280
SPL350A	150	350
SPL600A	300	600
SPL1000A	300	1000







## Main Features:

- 🔥 Designed to manage different types of biomass in pellet format;
- 🔥 Mechanical cleaning of the burner;
- 🔥 Pneumatic cleaning of the burner;
- 🔥 Automatic ignition system;
- 🔥 Power modulation (up to 5 levels);
- 🔥 Quality product, with high efficiency and reliability.

## Advantages:

- 🔥 Repurposing of farming waste;
- 🔥 Cost-effective energy source;
- 🔥 Renewable energy.



SPL35A

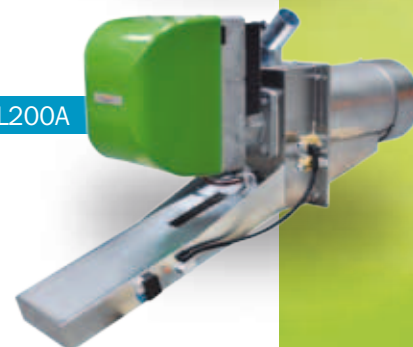


Agripellet

SPL65A



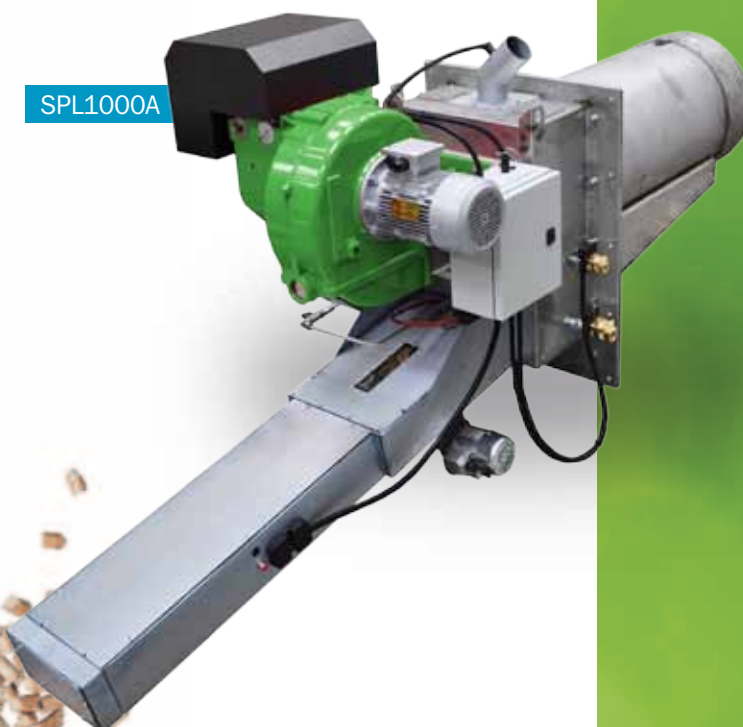
SPL200A



SPL350A



SPL1000A



## Agripellet: waste becomes a product

Farming waste repurposed as an environmentally friendly and cost-effective energy source.

### Biomass specifications

Ash content	< 6%
Ash-melting behavior	si
Humidity	< 10%
Format	pellet
Density	650 kg/m <sup>3</sup>

### Some examples:



Miscanthus pellet



Pellet from vine shoots



Straw pellet

**FLAME**  
HORIZONTAL

**AUTOMATIC**  
**CLEANING**  
OF THE BURNER

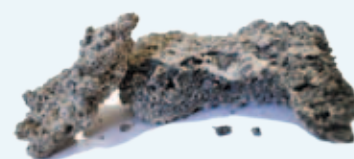


Agripellet is a biomass of lower quality compared to certified wood pellet; its chemical composition includes substances with low fusion temperature causing ash-melting behavior during combustion at high temperature (above fusion point). It is also characterized by high ash content. Termocabi's agripellet burner was designed to manage these combustion difficulties.



### Ash

The % of ash is a strong index of the pellet quality. Certified wood pellet has an ash content of about 0.7%. This also means that every 100 kg of pellet burned results in 700 g of ash. In case of agripellet, the % of ash is usually higher and therefore it requires a special burner equipped with an automatic cleaning system.



### Sintering

Agripellet can often include substances with low fusion temperature. During combustion, operation at temperatures above the fusion point can cause ash-melting behavior. This phenomenon is manifested with the formation of blocks of melted ash that can reach large dimensions. These blocks need to be removed from the gasification grill of the burner or they will cause problems with the combustion and will eventually block the machinery. Termocabi's agripellet burner can effectively manage sintering through its advanced cleaning system.



## Termocabi's system equipped with all of the accessories

### 1 Pellet stocking tank

Must be located next to the furnace so that the feeding screw can load the pellet into the boiler by gravity. Made of painted steel (on the outside) and galvanized sheet metal (on the inside); it can be equipped with level sensors in case of an installation with an automatic refilling system from an external tank. It is available in two different sizes: 120 Kg and 220 Kg.

### 4 Rotary Valve

Security valve located between the burner and the pellet tank. In case of negative pressure in the combustion chamber, the hot air would tend to escape through the feeding tube. The rotary valve isolates the pellet stocking system from the burner preventing the risk of fire. A security thermostat is also located on the feeding tube, which turns off the burner in case the temperature is above a safe threshold.

### 5 Automatic cleaning kit

It is required for keeping the gasification grill clean and therefore to maintain an efficient combustion. The system is completely automatic and is regulated by the control panel. The system is made of a air diffuser installed inside the burner and an electro valve to adjust the air input. It is possible to position the air entrance either on the left or right side of the burner, based on the opening direction of the boiler door.

### 2 Feeding Screw

Entirely made of carbon steel, the size is designed in order to prevent the pellet from becoming blocked between the spiral and the tube. It is equipped with a motor controlled by the burner's control panel, which regulates the operational time based on the power required.

### 3 Control panel

Electronic panel to control the burner and all installed accessories. Commands are entered through a touch membrane; the operations status and alarms are shown by led lights. The control panel is extremely user-friendly even for the final customer.

### 6 Compressed air tank

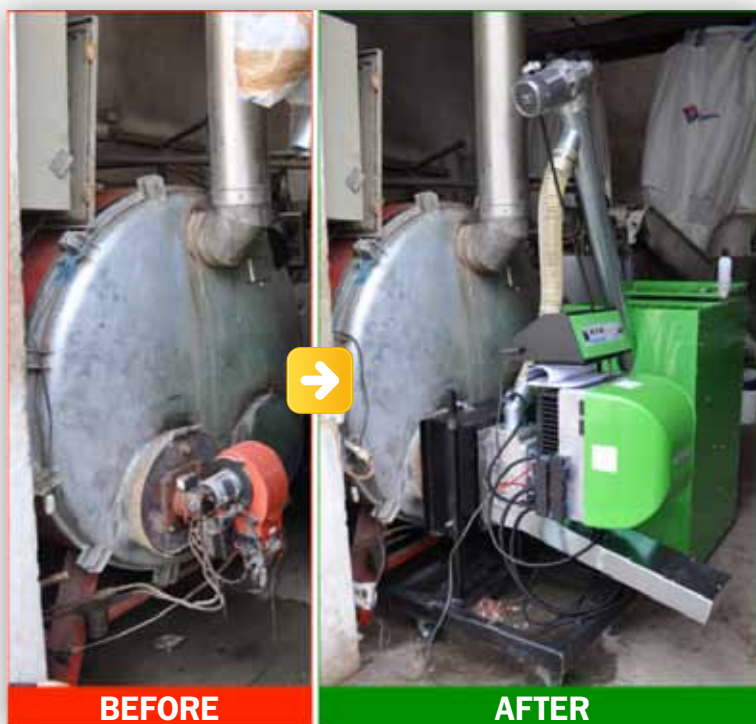
Placed between the automatic cleaning kit and the air compressor, it provides the correct amount of air at the appropriate pressure required for the operation of the automatic cleaning kit. The design includes one-way valves to load the air, security valve and a release valve on the bottom.



## Several possible applications

### TRANSFORMATION OF EXISTING INSTALLATIONS

Revalue the existing furnace by replacing existing gas, LPG or oil burner with a pellet burner.



LPG, Natural Gas, Wood

Pellet



### COGENERATION

3 burners – SPL1000A





## BREAD OVENS

2 burners SPL200A (Romania)



Agripellet

## STEAM GENERATORS

SPL300A (The Netherlands)



## HOT AIR GENERATORS

For greenhouses SPL600A (Spain)



## DRIERS

2 burners – SPL1000A (Hungary)











Next-generation Biomass Technology



**Termocabi burners are entirely manufactured and assembled in Italy.** They generate a horizontal flame and can be installed on boilers originally designed for other fuels. The first quality materials - such as steel for high temperatures - ensure reliable and extended operational time. The wood pellet SPL burners up to 70 kW were awarded with the European certification EN16270. **High efficiency (>90%) and low emission** (class 5 acc. to EN15270) guarantee a high-quality and technologically advanced product.

Termocabi is constantly striving to research and develop innovative and fine-quality products.



-  **Specialized** in the production of biomass burners.
-  Large range of products: 3 lines of burners for a total of **24 models** from 25 to 1000 kW.
-  100 % of our resources invested in researching and developing the best result obtainable.
-  More than 20 years of experience in the combustion field.
-  Product commercialized in more than 17 countries inside and outside the European community.
-  **Quality** focus.

## TERMOCABI SRL

Via Borghisani, 13  
26035 Pieve San Giacomo (CR) - Italy  
Tel. +39 0372 640033  
Fax +39 0372 64439  
[termocabi@termocabi.it](mailto:termocabi@termocabi.it)  
[www.termocabi.it](http://www.termocabi.it)